

PRECAST UNIT PRECAST BASE 1" CLEAR── CAST IN PLACE BASE JOINT DETAILS BASE DETAILS

NOTES:

- 1. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
- 2. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE SPECIFICATIONS. * MINIMUM DEPTH OF SUMP TO BE 2'
- ** WHEN A CURB INLET IS INSTALLED, THE OPENING IS TO BE 24"±1" X 27"±1"

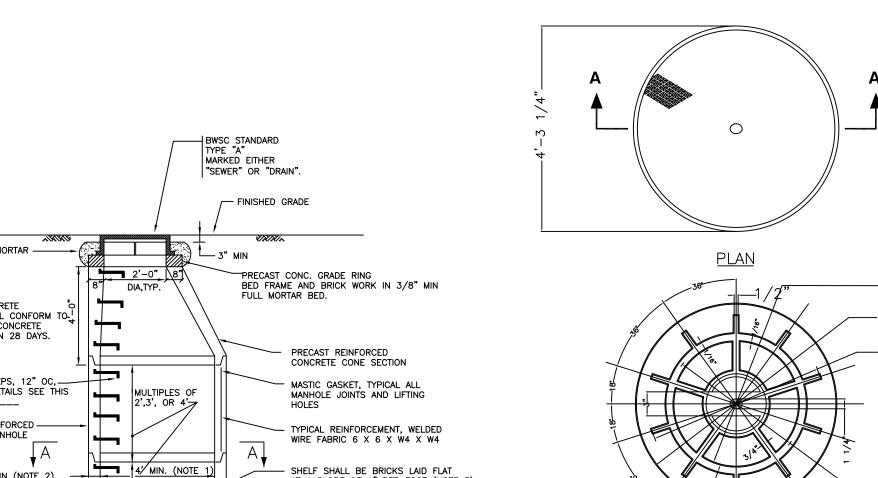
CATCH BASIN AND MANHOLE JOINT DETAILS

CUT KEY OPENING FOR RT. HAND GRATE DETAIL "B" SECTION A-A SEE DETAIL "C" DETAIL "A"

- 1. THIS CATCH BASIN GRATE IS PATENTED. THE PATENT HOLDER GRANTS FREE LICENSE TO ANY COMPANY TO MANUFACTURE AND SUPPLY THIS GRATE FOR HIGHWAY PROJECTS ONLY IN MASSACHUSETTS. THE ABOVE TO BE NOTED ON
- 2. THE DETAILS OF THE GRATE AS SHOWN ABOVE IS FOR A WATER FLOW COMING FROM THE RIGHT (DESIGNATED AS A RIGHT GRATE). WHEN THE FLOW IS FROM THE LEFT (DESIGNATED LEFT GRATE) IT IS TO BE TURNED 180° FROM THE POSITION SHOWN ABOVE. THE DIRECTION OF FLOW SHOULD BE SHOWN ON THE DRAINAGE PLANS WHEN THE ABOVE GRATE IS USED.
- 3. THE GRATE IS TO BE MADE OF CAST IRON.

THE CONSTRUCTION PLANS WHEN APPLICABLE.

PRECAST CONCRETE CATCH BASIN



TYPICAL PRECAST CONCRETE MANHOLE <u>N.T.S</u>

THE WORDS "DRAIN" SHALL BE CUT ON SURFACE DRAIN COVERS. THE WORDS "SEWER" SHALL BE CUT ON SEWER COVERS.

MANHOLE COVER

<u>N.T.S.</u>

FINISH <u>PLAN</u> SECTION A-A

MASSACHUSETTS CASCADE GRATE

MANHOLE FRAME <u>N.T.S.</u>

NOTES FOR MANHOLES:

- 1. ALL CAST IN PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 LBS PER SQ INCH, USING 3/4" MAXIMUM SIZE AGGREGATE.
- REINFORCING STEEL BARS ARE DEFORMED BARS OF NEW BILLET STEEL ASTM A615 GRADE 60.
- 3. WELDED WIRE FABRIC CONFORMS TO ASTM A185.
- 4. CAST IRON FRAME, AND COVER TO BE MARKED EITHER "SEWER" OR "DRAIN".
- 5. DESIGN LIVE LOAD HS20-44.
- 6. MINIMUM COVER FOR REINFORCING IN WALLS OR SLABS POURED AGAINST EARTH SHALL BE 3 INCHES, ALL OTHER SHALL BE 2 INCHES UNLESS OTHERWISE NOTED.
- 7. USE 2'-0" LENGTHS OF PIPE STUBS AT ALL MANHOLES FOR PVC PIPE. USE 4'-0" MAX LENGTH OF PIPE STUBS AT ALL MANHOLES FOR RC OR DI PIPE.
- 8. THESE MANHOLE DETAILS SHALL BE USED FOR BOTH SANITARY & STORM DRAIN MANHOLES.
- 9. MAXIMUM PRESSURE ON SOIL BELOW CAST IN PLACE CONCRETE BASE SHALL NOT EXCEED ALLOWABLE BEARING PRESSURE.

